Special Issue

Advanced Management and Control Strategies for Power Generation Systems and Microgrids

Message from the Guest Editors

The design of advanced control and energy management methodologies is important to promote the development of sustainable power generation systems with increased integration of renewable energy and storage systems. The objective of this issue is to address challenges related to power quality and stability in power generation systems and microgrids considering both stationary and e-mobility applications. These issues can be worsened due to reduced inertia and limited power capacity of power-electronics dominated systems, RES production intermittency, and load uncertainties. It requires the development of robust control techniques and multiobjective energy management strategies. Topics of interest include, but are not limited to:

- Modeling, stability analysis, and control of renewable energy and storage systems
- Assessment and mitigation of power quality problems in power generation units and microgrids
- Advanced control solutions for power-electronics dominated systems
- Fault-tolerant control for power generation units and microgrids
- Hybrid energy systems: sizing optimisation and energy management
- Hierarchical control techniques for distributed generation systems

Guest Editors

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Deadline for manuscript submissions

closed (30 July 2021)

Energies

an Open Access Journal by MDPI

Impact Factor 3.0
CiteScore 6.2

mdpi.com/si/62987

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Message from the Editor-in-Chief

Energies is an international, open access journal in energy engineering and research. The journal publishes original papers, review articles, technical notes, and letters. Authors are encouraged to submit manuscripts which bridge the gaps between research, development and implementation. The journal provides a forum for information on research, innovation, and demonstration in the areas of energy conversion and conservation, the optimal use of energy resources, optimization of energy processes, mitigation of environmental pollutants, and sustainable energy systems.

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